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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/727,324	11/30/2000	Michael Bennett Freeman	99-100	2279

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02/07/2003

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EXAMINER

SHOSHO, CALLIE E

ART UNIT

PAPER NUMBER

1714

DATE MAILED: 02/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/727,324

Applicant(s)

FREEMAN ET AL.

Examiner

Callie E. Shosho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

1. All outstanding rejections are overcome by applicants' amendment filed 1/16/02.

In light of the new grounds of rejection as set forth below with respect to EP 590604, the finality of the previous office action is withdrawn, and thus, the following action is non-final.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1 and 3-9 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 590604.

EP 590604 disclose a copolymer comprising (meth)acrylates and 1-15% acid component such as (meth)acrylic acid and itaconic acid wherein the copolymer has average particle size of 100-500 nm, glass transition temperature of 10⁰-50⁰ C, and particle size distribution of 100-1000 nm. Additionally, the copolymer is in the form of an emulsion (page 2, lines 40-45, page 3, lines 5-10 and 19-21, and page 4, lines 22-28 and 57-58).

While there is no disclosure that the copolymer is a binder, ink binder, or useful as a binder in ink jet inks as presently claimed, applicants attention is drawn to MPEP 2111.02 which states that "if the body of a claim fully and intrinsically sets forth all the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction". Further, MPEP 2111.02 states that statements in the preamble reciting the purpose or intended

use of the claimed invention must be evaluated to determine whether the purpose or intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

It is the examiner's position that none of the preambles in the present claims state any distinct definition of any of the claimed invention's limitations and further that the purpose, i.e. binder or ink binder, or intended use, i.e. useful as a binder in inkjet inks, recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art EP 590604 and further that the prior art structure which is a polymer identical to that set forth in the present claims is capable of performing the recited purpose or intended use.

In light of the above, it is clear that EP 590604 anticipates the present claims.

Response to Arguments

4. Applicants' arguments with respect to EP 867484, Horii et al. (U.S. 5,622,778), and Farwaha et al. (U.S. 5,959,024) have been considered but they are moot in view of the discontinuation of these references against the present claims.

5. Applicants' arguments filed 1/16/02 have been fully considered but with the exception of arguments relating to EP 867484, Horii et al., and Farwaha et al., they are not persuasive.

Specifically, applicants argue that there is no disclosure in EP 590604 of maximum and minimum particle size, i.e. particle size distribution, and that while the glass transition temperature (T_g) and average particle size of the copolymer of EP 590604 overlap those values

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presently claimed, more of the of Tg fails to overlap then actually does overlap the claimed range and of the 900 nm range of average particle diameter, there is only a 150 nm overlap.

Before responding to the arguments, it is noted that the average particle diameter and particle size distribution of EP 590604 set forth on page 7 of the previous office action mailed 8/21/02, Paper No.7, is in error. As is clear from page 2, lines 45-46 and page 4, line 28 of EP 590604, the average particle diameter of the copolymer is 100-500 nm and the particle size distribution is 100-1000 nm.

With respect to applicants' arguments regarding the glass transition temperature, it is agreed that there is only overlap at the upper end of the presently claimed glass transition temperature range, however, the fact remains that there still is significant overlap, i.e. a third of the presently claimed range (10-25 °C) is overlapped by that of EP 590604. Further, according to MPEP 2131.03, the "test" for lack of sufficient specificity arises when the reference range is relatively broad with respect to the claimed range. Given that it is the examiner's position that the reference Tg is not relatively broad as compared to the claimed Tg, this property does not meet the "test" for lack of sufficient specificity as required in MPEP 2131.03.

With respect to the average particle diameter and particle size distribution, it is firstly noted that it is the examiner's position that EP 590604 does disclose maximum and minimum values for the particle size. Page 2, lines 45-46 of EP 560604 discloses that the copolymer has particle size of 100-1000 nm while page 4, lines 22-26 disclose that if the particle size is less than 100 nm, freeze-thaw stability is inferior while if the particle size is greater than 1000 nm, undesirable settling of the particles occurs. Thus, it is clear that the particle size distribution of EP 590604 is 100-1000 nm. Further, from page 4, line 28, it is clear that the average particle size

is 100-500 nm. Thus, given that EP 590604 discloses average particle size of 100-500 nm and particle size distribution of 100-1000 nm while the present claims require average particle diameter of 250-400 nm and particle size distribution of 130-450 nm, it is the examiner's position that either the average particle diameter or the particle size distribution of EP 590604 is not unduly broad as compared to the claimed average particle diameter or particle size distribution presently claimed. The average particle diameter and the particle size distribution disclosed by EP 590604 completely overlap the average particle diameter and the particle size distribution presently claimed.

Further, even if the average particle size diameter and particle size distribution were broad as compared to the presently claimed ranges as argued by applicants, it is noted that MPEP 2131.03 states that "What constitutes "sufficient specificity" is fact dependent. If the claims are directed to a narrow range, the reference teaches a broad range, and there is evidence of unexpected results within the claimed narrow range, depending on the other facts of the case, it may be reasonable to conclude that the narrow range is not disclosed with "sufficient specificity" to constitute an anticipation of the claims. The unexpected results may also render the claims unobvious." However, applicants have not provided such evidence of unexpected results.

There are present three comparative examples in the present specification. With respect to comparative example 1, there is not proper side-by-side comparison between binder within the scope of the present claims and binder outside the scope of the present claims. That is, none of the inventive examples present in the instant specification has bimodal distribution, and thus, there cannot be a proper side-by-side comparison between comparative example 1 and any of the inventive inks. With respect to comparative example 3, the data does not establish unexpected or

surprising results over the “closest” prior art EP 590604 given that the Tg disclosed by EP 590604 is closer to the Tg presently claimed than the value set forth in comparative example 3. With respect to comparative example 2, it is noted that this example is also not persuasive given that there is not proper comparison between binder within the scope of the present claims and binder outside the scope of the present claims given that the inventive examples set forth in the present specification all disclose binder with Tg of 0 °C or 13 °C. This data is not commensurate in scope with the scope of the present claims given that the present claims disclose Tg of -20 to 25 °C. Thus, there is no indication of what happens for binder possessing Tg other than these two values. Further, the comparative example utilizes copolymer with Tg of 50 °C, which is at the uppermost end of the Tg range disclosed by EP 590604. There is no indication of what happens for Tg that is less than 50 °C but still falls outside the scope of the present claims. This is especially significant in light of the overlap between the Tg of EP 590604 and the claimed Tg.

Further, it is not understood why example 3 and example 6 are inventive examples given that example 3 uses copolymer with particle size distribution which falls outside the scope of the present claims (231-480 nm) and example 6 uses binder with average particle diameter which falls outside the scope of the present claims (238 nm). Clarification is requested.

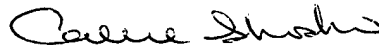
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the

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organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Callie E. Shosho
Examiner
Art Unit 1714

CS

January 31, 2003